

Preliminary Amendment  
Dated: January 23, 2006  
Title: System for Managing Pathogens and Irritants and Monitoring Usage of  
Anti-Bacterial Formulations

App. No.: 10/797,850  
Inventor: Cope, Fredrick O.  
Group Art Unit: 1615

### **Amendment(s) to the Claims**

- Please cancel claims 1-14 beginning on page 30 of the Claims section and replace with claims 15-36 as listed below:
1. (Canceled) A system for managing pathogens and irritants comprising the steps of:
    - a. washing skin with an antibacterial hand soap;
    - b. applying an antibacterial skin barrier lotion; and
    - c. spraying an antibacterial surface cleaner on hard surfaces in an area.
  2. (Canceled) A validation and monitoring kit used to determine if one has complied with the application of an antibacterial hand soap or a skin barrier lotion, said validation and monitoring kit comprising: a bottle with a removable cap, a wick, and a dye diluted in water.
  3. (Canceled) An emulsion formulation for cleansing the skin comprising: purified water in an amount of about 85 to about 99.5 percent by weight, N, N-bis-(2-OH-ethyl) lauramide in an amount of about 0.25 to about 5 percent by weight, a sodium sulfonate of C<sub>14-16</sub> olefin in an amount of about 0.05 to about 3 percent by weight, polyethylene glycol lauryl ether sodium sulfuric acid in an amount of about 0.03 to about 3.5 percent by weight, polyquaternium-7 in an amount of about 0.015 to about 2.5 percent by weight, chlorhexidine in an amount of about 0.25 to about 4 percent by weight, an antioxidant in an amount of about 0.05 to about 1 percent by weight and phenolic in an amount of about 0.015 to about 1.75 percent by weight.
  4. (Canceled) The emulsion formulation of claim 3 additionally comprising a plant fatty acid in an amount of about 0.02 to about 1.5 percent by weight.

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5. (Canceled) An emulsion formulation for topical application to the skin comprising:  
purified water in an amount of about 80 to 99.5 percent by weight, a group selected  
from the group consisting of waxy starch and a polysaccharide in an amount of  
about 0.5 to about 15 percent by weight, a group selected from the group consisting  
of petrolatum and any other mineral oil in an amount of about 0.125 to about 12  
percent by weight, other plant or vegetable oils or extracts in an amount of about  
0.01 to about 8 percent by weight, a viscosity stabilizer in an amount of about 0.01  
to about 3 percent by weight, a viscosity enhancer in an amount of about 0.01 to  
about 3 percent by weight, an antioxidant or stabilizer in an amount of about 0.01 to  
about 5 percent by weight,  $MgCl_2$  in an amount of about 0.01 to about 1 percent by  
weight, methyl paraben in an amount of about 0.01 to about 1 percent by weight,  
propyl paraben in an amount of about 0.01 to about 1 percent by weight, citricidal in  
an amount of about 0.01 to about 3 percent by weight, benzalkonium chloride in an  
amount of about 0.01 to about 2 percent by weight, and tri-N-butyl  $PO_4$  in an  
amount of about 0.01 to about 1 percent by weight.
6. (Canceled) An emulsion formulation of claim 5 additionally comprising benzoic acid  
in an amount of about 0.01 to about 1 percent by weight.
7. (Canceled) An emulsion formulation of claim 5 additionally comprising boric acid in  
an amount of about 0.01 to about 1 percent by weight.
8. (Canceled) An emulsion formulation of claim 5 additionally comprising benzoyl  
peroxide in an amount of about 0.05 to about 3 percent by weight.
9. (Canceled) A spray formulation for application to surfaces comprising: purified

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water in an amount of about 85 to about 99.5 percent by weight, sodium metasilicate, nonoxynol-9 in an amount of about 0.02 to about 2.5 percent by weight, butyl cellusolve in an amount of about 0.05 to about 5.5 percent by weight, barquat 50 in an amount of about 0.05 to about 3.5 percent by weight, and barlox 12 in an amount of about 0.05 to about 3 percent by weight.

10. (Canceled) An emulsion formulation of claim 9 additionally comprising benzoyl peroxide in an amount of about 0.05 to about 3 percent by weight.
11. (Canceled) A method of validating and monitoring to see if one has complied with the application of an antibacterial hand soap or a skin barrier lotion comprising the steps of: touching an applicator tip containing a dye to any topical surface, pulling the applicator tip along said surface for about 1 to 1 ½ inches, drying said dye for about 5-8 seconds, wiping said surface with a tissue and observing whether there is a colored stain on said surface.
12. (Canceled) The method of claim 11, wherein said topical surface is human hands.
13. (Canceled) The method of claim 11, wherein said dye is a blue-colored dye.
14. (Canceled) The method of claim 13, wherein said blue dye is crystal violet.
15. (New) An antimicrobial topical skin barrier lotion comprising:  
a mixture of 100 parts of a natural or synthetic polysaccharide to 10 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;  
one or more bactericidal agents; and  
one or more fungicidal agents.

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16. (New) An antimicrobial topical skin barrier lotion comprising:
- a mixture of 100 parts of a natural or synthetic polysaccharide to 10 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;
  - one or more bactericidal agents;
  - one or more moldicidal or fungicidal agents;
  - a viscosity stabilizer;
  - a viscosity enhancer;
  - an antioxidant;
  - a detergent;
  - an oil, selected from the group consisting of plant, vegetable, mineral and synthetic oil; and
  - optionally, one or more of benzoic acid and boric acid.
17. (New) An antimicrobial topical skin barrier lotion comprising:
- a mixture of 100 parts of a natural or synthetic polysaccharide to 10 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated; and
  - one or more bactericidal agents.
18. (New) A water-based antimicrobial topical skin barrier lotion according to claim 16 comprising:
- a mixture of 100 parts of waxy cornstarch to 10 parts of petrolatum jelly, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;

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- 0.02 to 5% of the bactericidal agents Citricidal and Benzalkonium chloride and optionally, 0.05 to 7% of the bactericidal agent benzoyl peroxide;  
0.02 to 2% of the moldicidal or fungicidal agents methyl and propyl paraben;  
0.01 to 3% of the viscosity stabilizer pectin;  
0.01 to 3% of the viscosity enhancer xanthan;  
0.01 to 5% of the antioxidant  $\alpha$ -tocopherol;  
0.01 to 1% of the detergent tri-N-butyl phosphate;  
0.01 to 8% of plant or vegetable oils or extracts; and  
optionally, one or more of the 0.01 to 1% benzoic acid and 0.01 to 1% boric acid.
19. (New) The lotion according to claim 15, wherein the lotion further provides protection against skin irritants.
20. (New) The lotion according to claim 19, wherein the skin irritant is selected from the group consisting of viruses, bacteria, fungi and sodium lauryl sulfate.
21. (New) The lotion according to claim 19, wherein the skin irritant is graded on erythema, edema and epidermal changes.
22. (New) The lotion according to claim 19, wherein the lotion is applied in the pre-treatment of skin prior to exposure to a skin irritant.
23. (New) An antimicrobial topical skin barrier lotion comprising:  
a mixture of 100 parts of a natural or synthetic polysaccharide to 50 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;  
one or more bactericidal agents; and

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one or more fungicidal agents.

24. (New) An antimicrobial topical skin barrier lotion comprising:

a mixture of 100 parts of a natural or synthetic polysaccharide to 50 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;

one or more bactericidal agents;

one or more moldicidal or fungicidal agents;

a viscosity stabilizer;

a viscosity enhancer;

an antioxidant;

a detergent;

an oil, selected from the group consisting of plant, vegetable, mineral and synthetic oil; and

optionally, one or more of benzoic acid and boric acid.

25. (New) An antibacterial topical skin barrier lotion comprising:

a mixture of 100 parts of a natural or synthetic polysaccharide to 50 parts of a mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated; and

one or more bactericidal agents.

26. (New) A water-based antimicrobial topical skin barrier lotion according to claim 24 comprising:

a mixture of 100 parts of waxy cornstarch to 50 parts of petrolatum jelly, wherein

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- the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;  
0.02 to 5% of the bactericidal agents Citricidal and Benzalkonium chloride and  
optionally, 0.05 to 7% of the bactericidal agent benzoyl peroxide;  
0.02 to 2% of the moldicidal or fungicidal agents methyl and propyl paraben;  
0.01 to 3% of the viscosity stabilizer pectin;  
0.01 to 3% of the viscosity enhancer xanthan;  
0.01 to 5% of the antioxidant  $\alpha$ -tocopherol;  
0.01 to 1% of the detergent tri-N-butyl phosphate;  
0.01 to 8% of plant or vegetable oils or extracts; and  
optionally, one or more of the 0.01 to 1% benzoic acid and 0.01 to 1% boric acid.
27. (New) The lotion according to claim 23, wherein the lotion further provides protection against skin irritants.
28. (New) The lotion according to claim 27, wherein the skin irritant is selected from the group consisting of viruses, bacteria, fungi and sodium lauryl sulfate.
29. (New) The lotion according to claim 27, wherein the skin irritant is graded on erythema, edema and epidermal changes.
30. (New) The lotion according to claim 27, wherein the lotion is applied in the pre-treatment of skin prior to exposure to a skin irritant.
31. (New) A water-based antibacterial hand cleanser comprising:  
a bactericidal agent;  
one or more detergents or cleaning agents;  
one or more antistatic agents;

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- one or more antioxidants;
- one or more phenolics; and
- optionally a plant fatty acid.
32. (New) The water-based antibacterial hand cleanser of claim 31 comprising:
- the detergent polyethylene glycol (1-4 lauryl ether sulfate sodium salt at 0.03-3.5%;
- the antistatic agents N,N Bis (2-hydroxyethyl) lauramide at 0.25-5% and
- Polyquaternium-7 at 0.015-2.5%;
- antioxidants at 0.05-1%;
- phenolics at 0.015-1.75%; and
- optionally plant fatty acids at 0.02-1.5%.
33. (New) A water-based spray surface cleaner comprising;
- one or more antimicrobial agents selected from the group consisting of
- bactericides, microbiocides, algicides, and fungicides;
- one or more detergents or cleaning agents; and
- a foam stabilizer.
34. (New) The water-based spray surface cleaner of claim 33 wherein the cleaner
- exhibits enhanced residual killing capacity, further comprising:
- a mixture of 100 parts of a natural or synthetic polysaccharide to 50 parts of a
- mineral oil, wherein the mixture is jet-cooked to form an emulsion, then dried, milled
- and rehydrated;
- one or more bactericidal agents;
- one or more moldicidal or fungicidal agents;



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- a viscosity stabilizer;
  - a viscosity enhancer;
  - an antioxidant;
  - a detergent;
  - an oil, selected from the group consisting of plant, vegetable, mineral and synthetic oil; and
  - optionally, one or more of benzoic acid and boric acid.
35. (New) The water-based spray surface cleaner of claim 33 comprising:
- the microbiocide Nonoxynol-9 or equivalent at 0.02-2.5%;
  - the bactericide, algicide and fungicide Barquat 50 at 0.05-3.5% of a 50% solution;
  - the detergent sodium metasilicate;
  - the cleaning agent butyl cellusolve at 0.05-5.5%;
  - the foam stabilizer Barolx 12 at 0.01-1.5%; and
  - optionally the bactericide benzoyl peroxide at 0.05-3%.
36. (New) The water-based spray surface cleaner of claim 35 wherein the cleaner exhibits enhanced residual killing capacity further comprising:
- a mixture of 100 parts of a waxy cornstarch to 50 parts of a petrolatum jelly, wherein the mixture is jet-cooked to form an emulsion, then dried, milled and rehydrated;
  - 0.02 to 5% of the bactericidal agents Citricidal and Benzalkonium chloride and
  - optionally, 0.05 to 7% of the bactericidal agent benzoyl peroxide;
  - 0.02 to 2% of the moldicidal or fungicidal agents methyl and propyl paraben;

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0.01 to 3% of the viscosity stabilizer pectin;

0.01 to 3% of the viscosity enhancer xanthan;

0.01 to 5% of the antioxidant  $\alpha$ -tocopherol;

0.01 to 1% of the detergent tri-N-butyl phosphate;

0.01 to 8% of plant or vegetable oils or extracts; and

optionally, one or more of the 0.01 to 1% benzoic acid and 0.01 to 1% boric acid.